

PATENT  
 Atty. Dkt. No. ATT 2003-0062

### IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-6 (Canceled)

7. (Currently Amended) ~~The method of claim 4~~ A method of configuring a traffic network, comprising:  
obtaining information about a plurality of nodes and a plurality of links in the traffic network;  
identifying possible origin-destination pairs;  
computing an optimum oblivious ratio of the traffic network; and  
configuring the traffic network in accordance with the computed oblivious ratio, wherein said computing the optimum oblivious ratio is performed by solving a linear program, wherein the oblivious ratio is computed using a single LP with  $O(mn^2)$  variables and  $O(nm^2)$  constraints.

8. (Currently Amended) The method of claim 7, wherein the number of  $O(nm^2)$  constraints are determined in ~~accord~~ accordance with:

mm r

$f_{ij}(e)$  is a routing

$\forall$  links  $l$ :  $\sum_m \text{cap}(m) \pi(l, m) < r$

$\forall$  links  $l$ ,  $\forall$  pairs  $i \rightarrow j$ :

$f_{ij}(l)/\text{cap}(l) - s_i^+(l, j) + s_i^-(l, j) = p_i(l, j)$

$\forall$  links  $l$ ,  $\forall$  nodes  $l$ ,  $\forall$  edges  $e = j \rightarrow k$ :

$\pi(l, \text{link-of}(e)) + p_i(i, j) - p_i(i, k) \leq 0$

$\forall$  links  $l, m$ :  $\pi(l, m) \leq 0$

$\forall$  links  $l$ ,  $\forall$  nodes  $i$ :  $p_i(i, i) = 0$

$\forall$  links  $l$ ,  $\forall$  nodes  $i, j$ :  $\pi(l, i, j) \leq 0$

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Claims 9-14 (Canceled)

15. (Currently Amended) ~~The method of claim 12~~ A method of configuring a traffic network, comprising:

obtaining information about a plurality of nodes and a plurality of links in the traffic network;

identifying possible origin-destination pairs;

computing an optimum network routing; and

configuring the traffic network in accordance with the computed optimum network routing, wherein said computing the optimum network routing is performed by solving a linear program, wherein the optimum network routing is computed using a single LP with  $O(mn^2)$  variables and  $O(nm^2)$  constraints.

16. (Currently Amended) The method of claim 15, wherein the ~~number of~~  $O(nm^2)$  constraints are determined in accord accordance with:

mm r

$f_{ij}(e)$  is a routing

$\forall \text{ links } l: \sum_m \text{cap}(m) \pi(l, m) < r$

$\forall \text{ links } l, \forall \text{ pairs } i \rightarrow j:$

$f_{ij}(l)/\text{cap}(l) - s_l^+(l, j) + s_l^-(l, j) = p_l(l, j)$

$\forall \text{ links } l, \forall \text{ nodes } i, \forall \text{ edges } e = j \rightarrow k:$

$\pi(l, \text{link-of}(e)) + p_l(i, j) - p_l(i, k) \leq 0$

$\forall \text{ links } l, m: \pi(l, m) \leq 0$

$\forall \text{ links } l, \forall \text{ nodes } i: p_l(i, i) = 0$

$\forall \text{ links } l, \forall \text{ nodes } i, j: \pi(l, i, j) \leq 0$

Claims 17-19 (Canceled)

20. (Currently Amended) ~~The traffic network of claim 17~~ A traffic network comprised of:

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a plurality of routers that support path-based routing and a plurality of links that connect the plurality of routers, wherein each path-based routing is configured in accordance with an oblivious routing configuration based on the plurality of routers and links, wherein the oblivious routing configuration is derived by identifying possible origin-destination pairs, computing an optimum network routing based on linear constraints placed on origin-destination pair demands, and configuring the path-based routing in accordance with the optimum network routing, wherein the optimum network routing is computed using a single LP with  $O(mn^2)$  variables and  $O(nm^2)$  constraints.

Claims 21-27 (Canceled)